Essential Skills Test|Study Guide

Directions: Refer to your notes, textbook and homework video tutors to review any concepts that you know you need to review.

Lessons 2-1 and 2-2 Mean, Median and Mode

1) What are the two steps you must follow in order to find the **mean** of a data set?

Step 1: _____

Step 2: _____

2) What must you do with a set of data **before** you find the **median**?

_____

3) Find the mean, median and mode for each set of data.

16 , 17 , 4 , 12 , 4 , 4 , 2 , 17 , 20

Mean = _____ Median = _____ Mode= _____

Multiplying and Dividing Whole Numbers-Show your work to multiply or divide.

4) 12 x 18	5) 345 x 17
6) 459 ÷ 9	7) 984 ÷ 12

Lessons 1-7 through 1-8 All Operations with Decimals- Find each sum, difference, product or quotient below. Then, write your answer in **word form** Show all of you work.

8) 5 + 12.08 **Word Form:**	9) 9 – 1.45 **Word Form:**
10) 16.03 + 5.28 **Word Form:**	11) 0.8 – 0.126 **Word Form:**
12) 53 x .04 **Word Form:**	13) 3.702(1.7) **Word Form:**
14) 385.6 ÷ 8	15) 2.25 ÷ 0.5

Word Form:	Word Form

Lessons 3-5 to 3-7 Solve One Step Equations

What operation will "undo" addition? _____

What operation will "undo" subtraction? _____

What operation will "undo" multiplication? _____

What operation will "undo" division? _____

Key Reminders:

- Remember to **isolate the variable** using the **inverse operation.**
- Show your work performing the same operation to **both sides** of the equation in order to keep it **balanced**.

16) $2.7 + m = 8.2$	17) $n - 3.2 = 15$
18) $25h = 450$	19) $b \div 11 = 87$

Lessons 5-2 to 5-5 Adding and Subtracting Fractions and Mixed Numbers- Show your work to find each sum or difference. Write all of your answers in simplest form.

Key Reminders:

- Before you can add or subtract, your fractions need to have a **common denominator**
- You **<u>may</u>** need to borrow (regroup) when you are subtracting mixed numbers

20) $7\frac{3}{5} + 13\frac{2}{3}$	21) $7\frac{2}{3} - 1\frac{5}{9}$
22) $\begin{array}{r} 1\frac{1}{10} \\ +\ 7\frac{1}{15} \\ \hline \end{array}$	23) $\begin{array}{r} 6\frac{2}{3} \\ -\ 3\frac{1}{15} \\ \hline \end{array}$

Lessons 6-2 to 6-4 Multiplying and Dividing Mixed Numbers- Show your work to find each sum or difference. Write all of your answers in simplest form.

Key Reminders:

- Before you can multiply or divide mixed numbers, change them to **improper fractions.**
- When multiplying, always check to see if you can **reduce before you multiply**
- For division, multiply by the **reciprocal** (leave it, change it, flip it)

24) $2\frac{1}{2} \times 2\frac{5}{6}$	25) $3\frac{1}{9} \times 1\frac{1}{2}$

26) $1\frac{1}{3} \div 4\frac{1}{2}$	27) $2\frac{1}{2} \div 2\frac{3}{8}$

Fraction-Decimal Equivalence- Change each fraction to a decimal and each decimal to a fraction.

28) ⅔	29) 5 ⅗
30) 0.35	31) 8.08

Lesson 6-7 Converting Units in the U.S. Customary System -Show your work to complete each conversion.

Key Notes:

Step 1- Identify whether you are going to multiply or divide:

Larger Unit → Smaller Unit (Multiply!) Smaller Unit →Larger Unit (Divide!)

Step 2- Choose the appropriate conversion(s) from the chart

Step 3- Complete the operation to convert to the new units

32) 3 mi = _____ feet	33) 32 oz. = _____ lb(s)	34) 40 in. = _____ft.

Lesson 1-4 Order of Operations- Simplify each expression.

Key Reminders:

- Follow the correct **order of operations** (Parentheses, Exponents, Multiply and Divide from left to right, Add and Subtract from left to right)
- Rewrite the expression after each step so you don't get lost.

36)	**37)**
$(2 + 2)^2 + (24 \div 12)$	$(43 - 3) \div 4 + 2^2$